

## NEW CHALCIDOID HYMENOPTERA.

By A. A. GIRAULT,

Bureau of Entomology, U. S. Dept. Agriculture.

### 1. **Mirzagrammosoma** new genus of the Elachertini.

*Female*: With the habitus of *Zagrammosoma* Ashmead but the scutellum without grooves, the vertex more elevated, elevated nearly for the length of the eyes which thus appear to be in the middle of the side of the head, the cheeks a little longer than the eyes. Antennæ inserted about in the middle of the face, the scape compressed (about three times longer than wide at apex), also the funicle and club, as in the named genus but there are two short ring-joints. Mandibles 6-dentate. Submarginal vein distinctly broken in *regularity*, distinctly longer than the marginal, the postmarginal two-thirds its length. Club not very distinctly jointed. Hind tibial spur distinct, not large. Parapsidal furrows rather long, meeting the small axillæ which are nearly entirely cephalad of the scutellum. Pronotum conical, as long as the scutellum which is about two-thirds the length of the scutum. Propodeum a little shorter than the scutellum, with a delicate median carina and no others, the spiracle very minute. Abdomen sessile, as long as the thorax, conical. Cephalic coxæ elongate. Elachertine in appearance.

#### (1) **Mirzagrammosoma lineaticeps** new species.

*Female*: Length, 2.05 mm., slender.

Purplish black, the legs except the hind femora and tibiæ (except the latter at tips) and head pale yellow (middle and hind coxæ not seen); a narrow pale yellow line down two-thirds of the pronotum from cephalic margin, latero-dorsad and ventro-laterad (total of four lines). Meson of proventer caudad broadly golden yellow. A broad black line down middle of the face from vertex to clypeus and another across the vertex and down each side to the eyes and then from the ventral ends of the latter to the end of the head across the cheek. Mandibles pale yellow, reddish at tip. A pale golden line up the lateral margin of the axilla and along the scutum some little distance beyond (cephalad). Thorax finely scaly, the propodeum glabrous; abdomen delicately scaly. Fore wing with the following remarkable pattern, the venation black except the pale postmarginal vein: A long cone-shaped black marking originating near base in an acute point, running clavately up the center of the blade and a little distad of the apex of the postmarginal vein obliquing up to the cephalic margin just before the apical turn, the oblique portion narrowing cephalo-distad; a rather narrow apical black stripe (but absent from the cephalo-distal fourth of the apical margin); an oblique (cephalo-proximad), rather narrow stripe from the first long marking at a little before its elbow to the base of the stigmal vein and entirely involving that vein; and another similar stripe but much

shorter, from the first stripe to the base of the marginal vein, the latter pallid except at base. Wings long. Caudal wings dusky at tip, with about a dozen lines of discal cilia. First two tarsal joints long (middle and hind legs). Funicle 1 large, a third longer than wide, 2 subquadrate. Flagellum covered with coarse hairs and stout spicules. Pedicel oval.

From two females collected at San Rafael, Jicoltepec, Mexico.

*Type:* Catalogue No. 19376, U. S. N. M., a female on a tag and a slide with the head, a pair of wings and the middle and hind tibiae.

There are no bristles on the scutellum. Body naked. Submarginal vein with six long bristles.

## 2. Genus *Plagiomerus* Crawford.

This genus bears two erect or semi-erect, slender clusters of black hairs at the apex of the scutellum. *Comys cyanea* Ashmead belongs here (identified by P. H. Timberlake) and differs from the genotype in having funicles 3-4 white, the axillae rather more separated, the scutum apparently more hairy. Yet the two are much alike otherwise. In *Plagiomerus diaspidis* Crawford, the mandibles are quadridentate.

## 3. *Chalcaspis arizonensis* new species.

*Female:* Length, 1.50 mm. Short and broad.

Very similar to the genotype, differing notably in that the legs are all metallic green except the tarsi and tips of the middle tibiae which are reddish like the scape. Antennae reddish except the bulb of scape and the pedicel which are metallic dark green, the club, however, sometimes darker.

The generic description of *Chalcaspis* is about correct. Head lenticular. Flagellum clavate and with a distinct ring-joint, the funicle joints all much wider than long, 6 largest; club enlarged and as long as the funicle, obliquely truncate from joint 2. Scape long and slender; pedicel somewhat longer than wide. Tegulae large. Scutum much wider than long. Axillae separated by a rather long median suture. Marginal vein somewhat longer than wide but not against the costal margin (thus in a sense absent). Mandibles strongly *bidentate*. Hind wings short and broad. The body is finely scaly between the punctures. Head wider than the thorax. The fore wing in both species is rather deeply infuscated out to the marginal vein. Compared with type of genotype.

Described from three females on tags in U. S. N. M. (labelled "Santa Rita Mts., Ariz., 10, 6. Hubbard and Schwarz").

*Type:* Catalogue No. 19377, U. S. N. M., one of the above on a tag plus slide with wings and head. Other two females with the same number as paratypes.

4. **Psylledontus secundus** new species.

*Female:* Length, 0.60 mm.

Differs from the genotype in being smaller, the scutellum is scaly *not* very finely longitudinally striate, funicles 2 and 3 more transverse, also funicle 4; the fore wings are distinctly narrower and the middle tibiae yellow except a band just below the knee, the caudal tibiae more broadly yellow at tip. The axillae are separated by a short carina in both species and the club is obliquely truncate from about half way up one side. Compared with types of the genotype. Face rather strongly inflexed.

Described from four specimens reared at Perideniya, Ceylon (Rutherford) from gall-making psyllids (nymphs).

*Type:* Catalogue No. 19378, U. S. N. M., a female on a tag and a slide bearing the head and fore wings. Three females on tags, same number as paratypes.

5. **Elasmus mexicanus** new species.

*Female:* Length, 2.60 mm.

Dark metallic blue, the scape, membranous apex of the postscutellum, tibiae, tarsi, knees and ends of the femora (all of cephalic femora except at base), yellow. Fore wings hyaline but with a large rounded substigmatal spot of fuscous. Hind tibiae with the dorsal black spines arranged to form a V just under the knee, then two large, long-ovate areas, then an oblique line across near tip. Head very finely scaly and with the usual scattered punctures; pronotum and scutum densely hairy, the scutellum naked (but two or four large bristles may be missing in this specimen), scaly. Propodeum plane, delicately scaly. Abdomen compressed distad, subglabrous, conic-ovate. Middle tibiae from dorsal or lateral aspect with a narrow marginal stripe of black (each margin) formed by dense black spines. Hind tibial spurs double. Hind coxae scaly, the femora longitudinally lined, the lines far apart. The long postmarginal vein with fuscous along it. Funicle 1 somewhat over twice longer than wide, 3 somewhat shorter, distinctly longer than the pedicel which is a half longer than wide at apex. Second ring-joint large, the first very short. Mandibles 7-dentate.

Described from one female in the U. S. N. M., collected at San Rafael, Jicoltepec, Mexico.

*Type:* Catalogue No. 19379, U. S. N. M., the specimen on a tag, fore wing and head on a slide.

6. **Elasmus marylandicus** new species.

*Female:* Length, 2.15 mm.

Dark metallic green-black, the abdomen deep orange yellow, the postscutellum (except at apex) lemon yellow; distal tips of cephalic coxae and femora and all tibiae, pale dusky yellow; rest of legs concolorous; black spines on dorsal aspect of caudal tibiae arranged in three

parallel wavy lines. Tip of valves of the ovipositor, distal fourth of abdomen above, a broad (nearly round) cross-stripe just cephalad of this and cephalad of this (at about the middle of the abdomen), a smaller, semi-circular spot, black. Also cephalad of the latter a mesal dot (at proximal third of the abdomen or less). Venation black, the wings hyaline. Proximal one-eighth of abdomen æneous black. Head with scattered punctures. Scutellum with two pairs of long setæ, otherwise naked, scaly. Funicles 1-3 subequal, each about twice longer than wide, 1 a little more, about twice the length of the pedicel which is subequal to club 3. Mandibles 5- and 6-dentate; two ring-joints.

Described from one female taken by sweeping grass, Chevy Chase Lake, Maryland, April 24, 1915.

*Type:* Catalogue No. 19380, U. S. N. M., the female on a tag, the head on a slide.

#### 7. *Merisus* Walker.

Differs from the pirenine genus *Apirene* Girault in bearing but one spur on the caudal tibiæ and the solid antennal club lacks a distinct terminal nipple, yet is tapering at apex. (The nipple is present sometimes.)

##### (1) *Merisus flaviventris* new species. Female.

Length, 2.10 mm. Abdomen larger than the rest of the body, depressed. Differs from the genotype of *Apirene* only in that the abdomen is wholly lemon yellow except tip of ovipositor valves (not visible from dorsad) and the brown meson of the abdominal venter. Also the antennal club is white-yellow, the antennæ brown, the scape darker. Base of cephalic femora black. Funicle 1 is shorter in relation to the pedicel, 2 is a little larger than 3, 6 subquadrate, subequal to 3-5. Mandibles 4-dentate.

Described from one female taken by sweeping grass, Chevy Chase Lake, Maryland, April 24, 1915.

*Type:* Catalogue No. 19381, U. S. N. M., a female on a tag, the head and hind legs on a slide.

##### (2) *Merisus semilongifasciata* new species.

*Female:* Differs from the preceding species in having the flagellum black except the yellow-white club, the base of the abdomen rather narrowly black and the abdomen with a short, black, lateral marginal stripe (partly broken into three spots) running to about the middle and commencing a short distance away from the basal marginal stripe. Also the funicle joints are all a little longer. Clypeus longitudinally striate.

From one female taken with the preceding.

*Type:* Catalogue No. 19382, U. S. N. M., the female and slide as in the preceding.

8. **Aphidencyrtus aspidioti** new species.

*Female*: Length, 1.45 mm.

Differs most notably from all the species of the genus in having funicles 5-6 white. Dark metallic green, the wings hyaline; tarsi (except distal joint), cephalic and caudal knees, distal half of cephalic tibiae, base and tips of caudal tibiae and all of middle tibiae excepting a rather broad cinctus a rather short distance below the knee, pure white. Funicles 1-4 subequal, distinctly wider than long, 5 and 6 each distinctly larger, 6 subquadrate. Club nearly as long as the funicle and somewhat wider, the middle joint quadrate. Marginal vein  $2\frac{1}{2}$  times longer than wide, nearly twice the length of the stigmal, the latter a little longer than the postmarginal. Third tooth of mandible truncate but its distal margin concave, the outer two teeth longer than the inner. Cheeks as long as the eyes. Axillae barely touching. Thorax scaly. Venation dusky yellow. Hind wings with about twelve lines of discal cilia. Agrees in color with *siphonophoræ* Ashmead except funicles 5 and 6; in the latter funicles 1-4 are subquadrate, the frons is a little broader.

Described from three females reared from *Aspidiotus perniciosus*, Lansing, Michigan, February 9, 1914. Experiment 1001.

*Type*: Catalogue No. 19383, U. S. N. M., a female on a slide.

*Aphidencyrtus aphidiphagus* (Ashmead) and *A. siphonophoræ* (Ashmead) are the same (types compared). *Encyrtus inquisitor* Howard is a very closely allied species, but the band on the middle tibiae is much longer and the axillae are separated. In *A. aphidiphagus*, the male antennae are 9-jointed, the club solid, the funicle joints clothed with soft hairs, the scape short, compressed; funicle joints cylindrical oval, each about a half the length of the club. There is a pair of the last species in the U. S. N. M., from Washington, D. C. and two males from the same place reared from *Siphonophora liriiodendri*, August 22, 1894. The type of *siphonophoræ* Ashmead bears Washington, D. C. as the type locality.

*Aphidencyrtus websteri* (Howard) differs from *siphonophoræ* in having the band on the middle tibiae as broad as half the length of that joint (female). There are specimens in the U. S. N. M. from Columbus, Ohio and a male reared from *Siphonophora avenæ*.

9. *Coccidencyrtus ensifer* (Howard).

*Female:* Length, 1.60 mm.

Differs from *Aphidencyrtus aspidioti* in having the marginal vein but slightly longer than wide, somewhat shorter than the stigmal and the postmarginal veins, the funicle and club are pale yellow and there is a small, square fuscous patch against the marginal vein; the funicle joints are all subquadrate, the club is more pointed and nearly equal in length to the funicle. The band on the middle tibia is somewhat longer. The axillæ are slightly separated. The male has the club solid, the funicle and club with rather long, scraggly hairs, the funicle joints cylindrical oval, only somewhat longer than wide, but much shorter than the club.

From several males and females reared from *Aspidiotus juglans-regiæ*, Muskegon, Michigan, July 7, 1914. Received from H. J. Franklin.